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Date: September 4, 2003

By: _____

Kay L. Gaviglio
Kay L. Gaviglio

PATENT
Docket No. GC541-4-C1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
Bott et al.

Serial No.: 10/629,976 Unassigned

Filed: Herewith

For: **SYNTHESIS AND USE OF
GLYCODENDRIMER REAGENTS**

)
)
) Group Art Unit: Not Assigned

)
) Examiner: Not Assigned

Information Disclosure Statement

Mail Stop DD
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants submit herewith patents, publications or other information (listed on the attached Form PTO-1449 and attached thereto) of which they are aware, that they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR §1.56.

This Information Disclosure Statement:

(a) ☐ accompanies the new patent application submitted herewith. 37 CFR §1.97(a).

(b) ☒ is filed within three months after the filing date of the application or within three months after the date of entry into the national stage of a PCT application as set forth in 37 CFR §1.491.

(c) ☐ as far as is known to the undersigned, is filed before the mailing date of a first Office Action on the merits.

(d) ☐ is filed after the first Office Action and more than three months after the application filing date or PCT national stage date of entry filing but, as far

as is known to the undersigned, prior to the mailing date of either a final rejection or a notice of allowance, whichever occurs first, and is accompanied by either the fee (\$180.00) set forth in 37 CFR §1.17(p) or a certification as specified in 37 CFR §1.97(e), as checked below. Authorization to charge Deposit Account No. 07-1048 in the amount of \$180.00 to cover the cost of this Information Disclosure Statement is provided in the Transmittal Letter submitted herewith in duplicate.

(e) ☐ is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and is accompanied by authorization (in the Transmittal Letter submitted herewith in duplicate) to charge Deposit Account No. 07-1048 the fee (\$180.00) set forth in 37 CFR §1.17(l)(1) and a certification as specified in 37 CFR §1.97(e), as checked below. **This document is to be considered as a petition requesting consideration of the Supplemental Information Disclosure Statement.**

[If either of boxes (d) or (e) is checked above, the following "certification" under 37 CFR §1.97(e) may need to be completed.] The undersigned certifies that:

☐ Each item of information contained in the Information Disclosure Statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

☐ No item of information contained in this Information Disclosure Statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Those patent(s) or publication(s) which are marked with an asterisk (*) on the attached Form PTO-1449 are not supplied because they were previously cited by or submitted to the Office in a prior application, Serial No. 09/824,827 filed April 2, 2001.

A concise explanation of relevance of the items listed on PTO-1449 is:

☒ not given

☐ given for each listed item

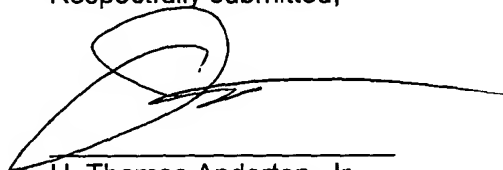
☐ given for only non-English language listed item(s)

☐ in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR §1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

In accordance with 37 CFR §1.97(b), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR §1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR §1.98 and MPEP §609 and the Examiner is respectfully requested to consider the listed references.

Respectfully submitted,

A handwritten signature in dark ink, featuring a large, stylized loop at the beginning and a long, sweeping horizontal stroke extending to the right.

H. Thomas Anderton, Jr.
Registration No. 40,895

Date: September 4, 2003

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PATENT AND TRADEMARK OFFICE

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(PTO-1449)

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APPLICANT
Bott et al.

FILING DATE
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GROUP ART UNIT
Unassigned

REFERENCE DESIGNATION

U.S. PATENT DOCUMENTS

EXAM'R INITIAL		DOCUMENT NUMBER	DATE	NAME	Class	Subclass	Filing Date If Appropriate
	A1	*5,403,737	04/04/95	Abrahmsen et al.			
	A2	*5,629,173	05/13/97	Abrahmsen et al.			
	A3	*5,316,935	05/31/94	Arnold et al.			
	A4	*5,208,158	05/04/93	Bech et al.			
	A5	*5,244,791	09/14/93	Estell			
	A6	*5,316,941	05/31/94	Estell et al.			
	A7	*5,955,340	02/21/99	Bott			
	A8	*5,340,735	08/23/94	Christianson et al.			

FOREIGN PATENT DOCUMENTS

EXAM'R INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	Subclass	TRANSLAT'N
	B1	*EP 3 328 229 A1	08/16/89	EP			
	B2	*WO 00/01712	01/13/00	PCT			
	B3	*WO 91/16423	04/18/91	PCT			
	B4	*WO 96/27671	02/27/96	PCT			
	B5	*WO 97/37007	10/09/97	PCT			
	B6	*WO 98/23732	06/04/98	PCT			
	B7	*WO 99/20723	04/29/99	PCT			
	B8	*WO 99/37323	07/29/99	PCT			
	B9	*WO 99/37324	07/29/99	PCT			

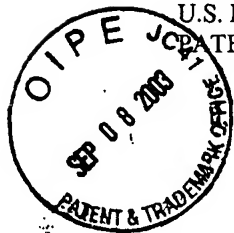
OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, Etc.)

	C1	*Bech et al., "Chemical Modifications of a Cysteiny Residue Introduced in the Binding Site of Carboxypeptidase Y by Site-Directed Mutagenesis," <u>Carlsberg Res. Commun.</u> , 53:381-393 (1988)
	C2	*Bech et al., "Significance of Hydrophobic S ₄ -P ₄ Interactions in Subtilisin 309 from <i>Bacillus lentus</i> ," <u>Biochemistry</u> , 32:2847-2852 (1993)
	C3	*Berglund et al., "Altering the Specificity of Subtilisin <i>B. Lentus</i> by Combining Site-Directed Mutagenesis and Chemical Modification," <u>Bioorganic & Mechanical Chemistry Letters</u> , 6:2507-2512 (1996)
	C4	*Berglund et al., "Chemical Modification of Cysteine Mutants of Subtilisin <i>Bacillus Lentus</i> Can Create Better Catalysts Than The Wild-Type Enzyme," <u>J. Am. Chem. Soc.</u> , 119:5265-5266 (1997)

EXAMINER

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant(s).



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C5	*Betz et al., "Crystal Structure of the Alkaline Proteinase Savinase TM from <i>Bacillus lentus</i> at 1.4 Å Resolution," <i>J. Mol. Biol.</i> , 223:427-445(1992)
C6	*Bonneau et al., "Alteration of the Specificity of Subtilisin BPN' by Site-Directed Mutagenesis in its S ₁ and S ₁ ' Binding Sites," <i>J. Am. Chem. Soc.</i> , 113:1026-30 (1991)
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C23	*Kaiser, "Catalytic Activity of Enzymes Altered at Their Active Sites," <i>Angew. Chem. Int. Ed. Engl.</i> , 27:913-922 (1988)
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C32	*Planas et al., "Reengineering the Catalytic Lysine of Aspartate Aminotransferase by Chemical Elaboration of a Genetically Introduced Cysteine," <i>Biochemistry</i> , 30:8268-8276 (1991)
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C37	*Ramachandran et al., "Stabilization of Barstar by Chemical Modification of the Buried Cysteines," <u>Biochemistry</u> , 35:8776-8785 (1996)
C38	*Roberts et al., "Reactivity of Small Thiolate Anions and Cysteine-25 in Papain Toward Methyl Methanethiosulfonate," <u>Biochemistry</u> , 25:5595-5601 (1986)
C39	*Siddiqui et al., "Arthrobacter D-Xylose Isomerase: Chemical Modification of Carboxy Groups and Protein Engineering Of pH Optimum," <u>Biochem. J.</u> , 295:685-691 (1993)
C40	*Smith et al., "An Engineered Change in Substrate Specificity of Ribulosebiphosphate Carboxylase/Oxygenase," <u>The Journal of Biological Chemistry</u> , 265:1243-1245 (1990)
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C46	*Stewart et al., "Catalytic Oxidation of Dithiols by a Semisynthetic Enzyme," <u>J. Am. Chem. Soc.</u> , 108:3480-3483 (1986)
C47	*Valenzuela et al., "Kinetic Properties of Succinylated and Ethylenediamine-Amidated δ -Chymotrypsins," <u>Biochim. Biophys. Acta</u> , 250:538-548 (1971)
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C49	*West et al., "Enzymes as Synthetic Catalysts: Mechanistic and Active-Site Considerations of Natural and Modified Chymotrypsin," <u>J. Am. Chem. Soc.</u> , 112:5313-5320 (1990)
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C51	*Wynn et al., "Chemical Modification of Protein Thiols: Formation of Mixed Disulfides," <u>Methods in Enzymology</u> , 251:351-356 (1995)

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C52	*Wynn et al., "Comparison of Straight Chain and Cyclic Unnatural Amino Acids Embedded in the Core of Staphylococcal Nuclease," <u>Protein Science</u> , 6:1621-1626 (1997)
C53	*Wynn et al., "Mobile Unnatural Amino Acid Side Chains in the Core of Staphylococcal Nuclease," <u>Protein Science</u> , 5:1026-1031 (1996)
C54	*Wynn et al., "Unnatural Amino Acid Packing Mutants of <i>Escherichia Coli</i> Thioredoxin Produced by Combined Mutagenesis/Chemical Modification Techniques," <u>Protein Science</u> , 2:395-403 (1993)

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